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With its investment in Saperatec Henkel focuses on a circular economy for flexible packaging

When waste becomes value

Düsseldorf – Flexible packaging combines the best of many kinds of materials – like plastic, film, paper and aluminum – to create packaging for food and nonfoods that provide a number of attributes, such as freshness, safety, light weighting, barrier protection and more. This versatile packaging protects products and slows down the process of spoilage – thus reducing CO2 emissions that are associated with food loss. However, these packages are difficult to recycle by design, often containing two or more different kinds of materials that cannot be returned to separate streams. The result: Valuable materials are lost after a single life as a package.

In Europe alone, converters face the challenge of well over a million euros in value lost in the form of industrial waste from flexible packaging each year. Hundreds of thousands of tons of this valuable material are discarded annually because the incompatible materials in laminated films cannot be recycled effectively.

Losing this value will soon be a thing of the past: As a leader in adhesives and coating solutions for packaging and consumer goods, Henkel is committed to the transformation to a circular economy. The company's recent strategic investment in the German-based recycling specialist Saperatec underscores its pioneering role in supporting sustainable solutions that go beyond adhesives and coatings. The start up's patented technology offers a solution right where the industry needs it most: in the separation of the incompatible materials in flexible laminates.



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Keeping valuable materials from becoming waste

"From keeping food fresh and reducing food waste to ensuring safety of food and anti-counterfeiting for pharmaceutical and medical products, flexible packaging plays a vital role for consumers all around the world," says Tilo Quink, Global Head of Henkel's Packaging Adhesives business. "Flexible packaging is literally a lifesaver, but current industrial processes also result in the loss of valuable raw materials as production scrap. As a supplier to this industry, we have the responsibility to develop new solutions to enable our customers to be more sustainable and to regain the value from the scrap they generate."

Henkel began working together with Saperatec in 2016, with the aim of developing and enhancing customized recyclable adhesives. This collaboration led to the creation of tailor-made adhesives that lead to improved output quality of the secondary raw materials within Saperatec's technology. Following this investment, Henkel will continue to expand and optimize this product range. Together with Henkel, Saperatec offers manufacturers an innovative and cost-efficient recycling technology that makes it possible to reintroduce production waste consisting of polyethylene (PE), aluminum and polyethylene terephthalate (PET) into the rawmaterial cycle, also thanks to the right adhesive design.

"Based on our many years of experience in the flexible packaging industry, we develop laminating adhesives with the highest standards of food safety, performance and efficiency," says Helga Garmann, Product Development Loctite Liofol Europe. "Our adhesives for the Saperatec process combine all these properties with an optimized separation behavior."

How does it work?

A liquid-based process separates the multi-layer laminates from one another without disintegrating them. The individual layers (PE, aluminum and PET) are sorted after the separation process and reintroduced into the value chain as high-quality materials that can be used for a broad variety of industrial applications. An important requirement for this high-quality and highly effective recycling of flexible packaging is the use of optimal adhesives.



What's next?

Henkel is developing further new adhesive systems to improve the recycling of other common flexible packaging structures. This includes adhesives for optimized recyclate properties and coatings that replace plastic layers in food packaging.

A task for the entire industry

"In a new plastics economy, plastic never becomes waste or pollution." This is at the heart of the New Plastics Economy, an initiative led by the Ellen MacArthur Foundation. In addition to its engagement in this three-year initiative, Henkel is also a founding member of CEFLEX, a consortium of more than 100 companies and organizations aiming to make flexible packaging – which consists of multiple layers of film or foil that are often difficult to separate – easier to recycle. The company is also a founding member of The Alliance to End Plastic Waste and a member of the Sustainable Packaging Coalition. A circular economy requires a holistic approach and is only achievable if companies from all stages in the value chain work together.

This information only refers to Henkel products and services in Europe. There may be discrepancies in other regions regarding, amongst other things, availability of products and offers. Loctite is a registered trademark of the Henkel group, protected in Germany and other countries.

About Henkel

Henkel has a balanced and diversified global portfolio. With strong brands and leading innovations and technologies across three business units – Adhesive Technologies, Beauty Care and Laundry & Home Care – the company has market-leading positions in both consumer and industrial goods businesses. Henkel Adhesive Technologies is the global market leader in the adhesives sector, for example, and the Laundry & Home Care and Beauty Care business units also hold leading positions in many markets and categories. Established in 1876, Henkel can look back on a 140-year history of successful business performance. In the 2018 financial year, Henkel generated sales of 19.89 billion euros and net earnings of 3.49 billion euros. The group employs more than 53,000 people worldwide, forming a diverse team bound together by a strong corporate culture, a shared corporate objective and common values. Henkel's progress and performance in sustainability is confirmed by numerous international rankings and ratings. Henkel preferred shares are listed in the German stock index DAX. Further information is available at <u>www.henkel.com</u>.



Photos can be downloaded from the Internet at: //www.henkel.de/presse

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The following photo material is available:



With the investment in the German-based recycling specialist Saperatec, Henkel expands its solution portfolio of recyclable adhesives in flexible laminates.





Jan-Dirk Auris, Executive Vice President Adhesive Technologies, met with Saperatec GmbH founder and CEO Dr. Sebastian Kernbaum at K2019 in Düsseldorf.